(1) grievances are dealt with in a time bound frame ;

(a) token system is introduced, wherever grievances are handed over personally with indication as to the time frame by which a reply would be given; and

(3) where a time angle is involved, as in matters relating to railways and hospitals, grievances should be settled on the spot, as far as possible.

Appearance of Comet Kalley

2467. SHRI DHULESHWAR MEENA : Will the PRIME MINISTER be pleased to state :

(a) whether Halley's Comet has made its appearance recently;

(b) whether it has been photographed by the Indian astronomers at the Kavalur Observatory in Tamil Nadu;

(c) whether any clues about the origin and creation of the solar system and other vital information has been gathered by these astrono mers after examining the photographs of the comet; and

(d) if so, what are the details thereof ?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI SHIVRAJ PATIL) : (a) Yes, Sir.

(b) Yes, Sir.

(c) and (d) The origin and creation of the solar system is a very complex scientific problem. During the period of stay of Halley's Comet, many observations will be taken, not only to photograph it but also to mesaure the spectral distribution of the emissions, direct measurement by cometary probes etc. In these efforts, a large number of scientists are working all over the globe. All these studies including intensive observations of Comet Halley during March-April, 1986 may lead to a better understanding of the phenomenon of orign and creation of the solar system.

Launching of Augmented Satellite Vehicle

2468. SHRI DHULESHWAR MEENA : Will the PRIME MINISTER be pleased to state the results likely to be achieved as a result of the launching of the Augmented Satellite Launch Vehicle ?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI SHIVRAJ PATIL) : The results likely to be achieved as a result of the launching of the Augmented Satellite Launch Vehicle are the following :—

—Development of a launch vehicle capable of placing a satellite of approximately 150 kg. weight in 400-500 km. near circular orbit for space scientific/applications experiments.

—Providing a test vehicle for flight testing importantsystems for future launch vehicles/satellite programmes of the Department like the Polar Satellite Launch Vehicles/Indian Remote Sensing Satellite, etc.

—Development and proving of important technologies essential for the development of PSLV/ GSLV and other future launch vehicles in a most cost effective way. These technologies include among others :

(1) Strap-on technology
(2) Closed loop guidance system.
(3) Yaw manoeuvre.
(4) Bulbous heat shield
(5) S-band telemetary system.